REMARKS

By this Amendment, claims 1, 3, 10-11 and 18 have been amended. No claims have been cancelled or newly added. Therefore, claims 1-24 remain pending. Support for the instant amendments is provided throughout the as-filed specification. Thus, no new matter has been added. In view of the foregoing amendments and following comments, allowance of all the claims pending in the application is respectfully requested. Since this Amendment is being presented with a Request for Continued Examination, entry of this Amendment is respectfully requested.

Claims 1-4, 7, 9-12, 15, 17-19, 22 and 24 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,819,434 to Hill ("Hill"). Claims 1-4, 9-12, 17-19 and 24 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,801,832 to Van Den Brink ("Van Den Brink"). Applicant respectfully traverses these rejections.

The cited portions of Hill and Van Den Brink do not anticipate claim 1 because they both fail to disclose, either expressly or inherently, teach or suggest all the features of the claim. Specifically, the cited portions of Hill and Van Den Brink do not disclose, teach or suggest *at least* an interferometer system for measuring displacement, along at least two directions within a three dimensional system of coordinates, of an object in a plane substantially parallel to a two dimensional plane, said interferometer system comprising, *inter alia*, a beam-splitter configured to split a radiation beam associated with said plane mirror interferometer system and a radiation beam associated with said differential plane mirror interferometer system into respective measuring beams and respective reference beams; at least one measuring mirror fixedly connected to said object and comprising a plurality of measuring mirror areas; at least one reference mirror comprising one or more reference mirror areas, wherein, in use, a direction of propagation of the reference beam associated with the differential plane mirror interferometer system just before incidence on a reference mirror is in a direction substantially orthogonal to the direction of the reference beam associated with the plane mirror interferometer just before incidence on a reference mirror and away from the beam-splitter, as recited in claim 1.

The cited portions of Hill describe an interferometer system 200 including a high stability plane mirror interferometer (HSPMI) and an angular displacement interferometer. Radiation from a radiation source 10 is incident on a non-polarizing beam splitter 220 and is split into radiation components 282 and 284. *See*, Figures 2a-c of Hill. The radiation component 284 is directed to the HSPMI by mirrors 231 and 233 and then is incident onto a polarizing beam splitter 230. The beam splitter 230 splits the radiation beam into a reference beam 295 and a measuring beam 291, which are used by a detector 272 to measure linear displacement of the object 280. *See*, column 14, lines 58-67 and column 15, lines 1-30 of Hill. The radiation component 282 is directed to an angular displacement interferometer that includes a polarizing beam splitter 240 and onto reflectors 242 and 246 and then onto the object 280. *See*, column 15, lines 31-56 of Hill. The beam splitter 240 splits the radiation component 282 into measuring beams 293 and 294, which are used by a detector 276 to measure angular displacement of the object 280. *See*, column 14, line 27-column 15, line 57 and Figures 2A-2C of Hill.

The cited portions of Van Den Brink describe an interferometer system comprising a beam-splitter block 250 having beam-splitting surfaces 251 and 252, a half-wave plate 253, a reference mirror 259, and a measuring mirror R_{10}. *See*, Figure 24 of Van Den Brink. Radiation beam b_{20} that includes frequency components ω_1 and ω_2 from a radiation source is incident on the beam-splitting surface 251. The frequency component ω_1 is split by the beam-splitting surfaces 251 and 252 into a plurality of sub-beams including beam b_{80} that is incident on mirror R_{10} at position P_{19}, beam b_{82} that incident on mirror R_{10} at position P_{20}, beam b_{85} that is incident on the reference mirror 259. *See*, Figure 24; column 30, lines 58-67 and column 31, lines 1-20 of Van Den Brink. The frequency component ω_2 is split by the beam-splitting surface 252 into a plurality of sub-beams including beam b_{83} that is incident on the reference mirror 252, beam b_{84} that incident on mirror R_{10} at position P_{21}. *Id.* All the sub-beams of the beams with frequency components ω_1 and ω_2 that are incident onto the half-wave plate 253 are <u>reflected into the beam-splitter block 250</u> to be incident on either the reference mirror 259 or measuring mirror R_{10}. *See*, column 30, line 58 - column 31, line 39 and Figure 24 of Van Den Brink.

However, neither Hill nor Van Den Brink disclose, teach or render obvious the aspect wherein the direction of propagation of the reference beam associated with the differential plane mirror interferometer system just before incidence on a reference mirror is in a direction

substantially orthogonal to the direction of the reference beam associated with the plane mirror interferometer just before incidence on a reference mirror and away from the beam-splitter, as recited in claim 1.

As noted above, the cited portions of Hill teach a multiple beam-splitter arrangement including the beam-splitter 220, the angular displacement interferometer including the beam-splitter 240 and associated reflective components 242, 243, 244, 245, and the plane mirror interferometer including the beam-splitter 230 and retroreflector 232. This is in striking contrast to claim 1 in which the beam-splitter is configured to split a radiation beam associated with the plane mirror interferometer system and a radiation beam associated with the differential plane mirror interferometer system into respective measuring beams and respective reference beams and the direction of propagation of the reference beam associated with the differential plane mirror interferometer system just before incidence on a reference mirror is in a direction substantially orthogonal to the direction of the reference beam associated with the plane mirror interferometer just before incidence on a reference mirror and away from the beam-splitter. None of the beam splitters 220, 230 and 240 are configured to split the radiation beam as defined in claim 1. Thus, for at least these reasons, Hill cannot anticipate claim 1.

Moreover, the cited portions of Van Den Brink teach the beam-splitter 250 having a half-wave plate 253 that reflects incident radiation into the body of the beam-splitter 250. Whereas, claim 1 recites, *inter alia*, the direction of propagation of the reference beam associated with the differential plane mirror interferometer system just before incidence on a reference mirror is in a direction substantially orthogonal to the direction of the reference beam associated with the plane mirror interferometer just before incidence on a reference mirror and away from the beam-splitter.

Furthermore, assuming, *arguendo*, it was possible to modify the cited portions of Van Den Brink such that radiation would be reflected away from the beam-splitter block 250 by repositioning the half-wave plate 253, which Applicant does not concede, it would destroy the principle of operation Van Den Brink's interferometer. In particular, the radiation component that is reflected off of the half-wave plate 253 would not be incident onto position P_{21} of the mirror R_{10} and thus would not function properly as a differential mirror interferometer. Thus, there would be no motivation to make such a change.

Claim 2 is patentable over the cited portions of Hill and Van Den Brink at least by virtue of its dependency from claim 1, and for the additional features recited therein.

Claim 3 recites similar aspects as claim 1 and is allowable at least for similar reasons as discussed above with respect to claim 1, and for the additional features recited therein. The cited portions of Hill and Van Den Brink fail to disclose, teach or suggest an interferometer system for measuring displacement along at least two directions in an XYZ system of co-ordinates, of an object in a plane substantially parallel to an XY plane, said interferometer system comprising, *inter alia*, a beam generator configured to generate a plurality of radiation beams, said beam generator comprising a beam-splitter block having a beam-splitting surface, wherein said beam-splitter block is configured to split at least one first beam of said plurality of radiation beams into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of said plurality of measuring mirror areas, and wherein said beam-splitter block is configured to split at least one second beam of said plurality of radiation beams into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and wherein, in use, the second reference beam associated with the at least one second beam exits the first reflector in a direction substantially orthogonal to the direction of the first reference beam associated with the at least one first beam exits the beam-splitter block and away from the beam-splitter block, as recited in claim 3.

Claims 4, 7 and 9 depend from claim 3 and are allowable by virtue of their dependency from claim 3 and for the additional features recited therein.

Claim 10 recites similar aspects as claim 1 and is allowable for at least similar reasons as discussed above with respect to claim 1, and for the additional features recited therein. The cited portions of Hill and Van Den Brink fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, an interferometer system configured to measure displacement of one of the supports, wherein said interferometer system comprises a beam-splitter block containing one beam-splitter, at least one mirror, and at least one retro-reflector,

such that said beam splitter block is configured to split a beam associated with said plane mirror interferometer system and a beam associated with said differential plane mirror interferometer system into respective measuring beams and respective reference beams; at least one measuring mirror fixedly connected to said one of the supports and comprising a plurality of measuring mirror areas; at least one reference mirror comprising one or more reference mirror areas, and wherein, in use, a direction of propagation of the reference beam associated with the differential plane mirror interferometer system just before incidence on a reference mirror is in a direction substantially orthogonal to the direction of the reference beam associated with the plane mirror interferometer just before incidence on a reference mirror and away from the beam-splitter block, as recited in claim 10.

Claim 11 recites similar aspects as claim 1 and is allowable for at least similar reasons as discussed above with respect to claim 1, and for the additional features recited therein. The cited portions of Hill and Van Den Brink fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, an interferometer system configured to measure displacement of one of the supports, wherein said interferometer system comprises, at least one measuring mirror fixedly connected to the one of the supports, said at least one measuring mirror comprising a plurality of measuring mirror areas; at least one reference mirror comprising one or more reference mirror areas that are configured to prevent beams from passing through said reference mirror; a beam generator configured to generate a plurality of beams, said beam generator comprising a beam-splitter block having a beam-splitting surface; and a plurality of radiation-sensitive detectors configured to convert radiation beams reflected towards said detectors into electric measuring signals, wherein said beam-splitter block is configured to split at least one first beam of said plurality of radiation beams into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of said plurality of measuring mirror areas, wherein said beam-splitter block is configured to split at least one second beam of said plurality of radiation beams into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said

beam-splitter block, and wherein, in use, the second reference beam associated with the at least one second beam exits the first reflector in direction substantially orthogonal to the direction the first reference beam associated with the at least one first beam exits the beam-splitter block and away from the beam-splitter block, as recited in claim 11.

Claims 12, 15 and 17 depend from claim 11 and are allowable by virtue of their dependency from claim 11 and for the additional features recited therein.

Claim 18 recites similar aspects as claim 1 and is allowable for at least similar reasons as discussed above with respect to claim 1, and for the additional features recited therein. The cited portions of Hill and Van Den Brink fail to disclose, teach or suggest a device manufacturing method comprising, *inter alia*, determining a position of one of the supports with an interferometer system, the determining including splitting at least a first beam of a plurality of beams, via a beam-splitter block having a beam-splitting surface, into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of a plurality of measuring mirror areas, the plurality of measuring mirror areas part of at least one measuring mirror fixedly connected to the one of the supports, and splitting at least a second beam of said plurality of beams, via said beam-splitter block, into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and said second reference beam being reflected in a substantially orthogonal direction with respect to the first reference beam by the first reflector and away from the beam-splitter block, and converting beams which are reflected towards detectors into electric measuring signals, as recited in claim 18.

Claims 19, 22 and 24 depend from claim 18 and are allowable by virtue of their dependency from claim 18 and for the additional features recited therein.

Thus, Applicant respectfully requests that the rejections of claim 1-4, 7, 9-12, 15, 17-19, 22 and 24 under 35 U.S.C. §102(e) based on Hill and claims 1-4, 9-12, 17-19 and 24 under 35 U.S.C. §102(b) based on Van Den Brink be withdrawn and the claims be allowed.

Claims 8, 16 and 23 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Hill. Applicant respectfully traverses this rejection because a *prima facie* case of obviousness has not been established.

Dependent claims 8, 16 and 23 are allowable at least by virtue of their dependence from claims 3, 11 and 18, and for the additional features it recites. As noted above, the cited portions of Hill disclose, teach or suggest the features recited in claims 3, 11 and 18.

Moreover, the Final Action concedes that Hill fail to disclose or teach the aspect of the plurality of radiation beam comprises at least three first radiation beams arranged to occupy a polygonal volume and at least one second radiation beam arranged to be in a position outside a polygonal volume. [Final Action, page 23]. The Final Action attempts to cure this admitted deficiency of Hill by relying on column 17, lines 22-30 of Hill, which allegedly teaches adding an additional beam-splitter into the beam splitter assembly in order to measure additional directions.

Even if Hill teaches the use of additional beam-splitters in the beam splitter assembly, which Applicant does not concede, there is nothing within this cited portion of Hill to teach or suggest at least the aspect wherein said plurality of radiation beams comprises at least three first radiation beams arranged to occupy a polygonal volume and at least one second radiation beam arranged to be in a position outside the polygonal volume as recited in claim 8. Just because adding additional beam-splitters to Hill's arrangement may be possible, the Final Action has not provided any teaching or reasoned basis within Hill to arrange the radiation beams in the manner recited in claim 8, and similarly recited in claims 16 and 23. The Examiner is reminded that "[the] mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." The motivation recited in the Final Action fails to provide reasoning, within the references or otherwise, for modifying Hill. Accordingly, it appears as though the rejection is improperly based on a classic exercise of hindsight reconstruction to allegedly arrive at Applicant's claimed invention.

Therefore, for at least the above reasons, Applicant respectfully submits that the rejections of claims 8, 16 and 23 under 35 U.S.C. §103(a) based on Hill should be withdrawn and the claims allowed.

Claims 5-6, 13-14 and 20-21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Hill in view of U.S. Patent No. 6,020,964 to Loopstra *et al.* ("Loopstra"). Applicant respectfully traverses this rejection because a *prima facie* case of obviousness has not been established.

Dependent claims 5-6, 13-14 and 20-21 are allowable at least by virtue of their dependency from claims 3, 11 and 18, respectively, and for the additional features they recite. As noted above, the cited portions of Hill fail to disclose, teach or suggest claims 3, 11 and 18. Moreover, the cited portions of Loopstra fail to cure the deficiencies of Hill.

Even assuming the cited portions of Hill are properly combinable with those of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. The cited portions of Loopstra teach an interferometer system 101 including a polarization-sensitive splitting prism 201, having an interface 202 for splitting radiation beams b_{25}, b_{20} from sources 229, 225, respectively, a reference reflector 205 and a Z reflector 164 for measuring displacement of a measuring mirror R_1, having Z measuring mirror R_3. Beam b_{25} is split by the interface 202 into a reference component that is reflected off of the reference reflector 205 and a measuring component that is incident on the Z measuring mirror R_3 and reflected off of Z reflector 164. Beam b_{20} is split by the interface 202 into a reference component that is reflected off of the reference reflector 205 and a measuring component that is incident on the measuring mirror R_1. *See*, column 20, lines 12-50 and Figure 11 of Loopstra. The reference components of beam b_{25} and of beam b_{20} exit the prism 201 in the **<u>same direction</u>**. This is in striking contrast to claim 3 in which the second reference beam associated with the at least one second beam exits the first reflector in a ***direction substantially orthogonal*** to the direction of the first reference beam associated with the at least one first beam that exits the beam-splitter block and away from the beam-splitter block.

Thus, any proper combination of the cited portions of Hill and Loopstra, cannot result in any way, in the invention of claim 3. Dependent claims 5 and 6 are allowable at least by virtue of their dependency from claim 3, and for the additional features they recite.

As noted above, the cited portions of Hill fail to disclose, teach or suggest claim 11. Similarly, as discussed above, the cited portions of Loopstra fail to remedy the defects of Hill. Specifically, the cited portions of Loopstra fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, an interferometer system configured to measure

displacement of one of the supports, wherein said interferometer system comprises, at least one measuring mirror fixedly connected to the one of the supports, said at least one measuring mirror comprising a plurality of measuring mirror areas; at least one reference mirror comprising one or more reference mirror areas that are configured to prevent beams from passing through said reference mirror; a beam generator configured to generate a plurality of beams, said beam generator comprising a beam-splitter block having a beam-splitting surface; and a plurality of radiation-sensitive detectors configured to convert radiation beams reflected towards said detectors into electric measuring signals, wherein said beam-splitter block is configured to split at least one first beam of said plurality of radiation beams into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of said plurality of measuring mirror areas, wherein said beam-splitter block is configured to split at least one second beam of said plurality of radiation beams into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and wherein, in use, the second reference beam associated with the at least one second beam exits the first reflector in direction substantially orthogonal to the direction the first reference beam associated with the at least one first beam exits the beam-splitter block and away from the beam-splitter block, as recited in claim 11.

Thus, even assuming the cited portions of Hill are properly combinable with those of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. Dependent claims 13 and 14 are allowable at least by virtue of their dependency from claim 11, and for the additional features they recite.

As noted above, the cited portions of Hill fail to disclose, teach or suggest claim 18. Similarly, as discussed above, the cited portions of Loopstra fail to remedy the defects of Hill. Specifically, the cited portions of Loopstra fail to disclose, teach or suggest a device manufacturing method comprising, *inter alia*, determining a position of one of the supports with an interferometer system, the determining including splitting at least a first beam of a

plurality of beams, via a beam-splitter block having a beam-splitting surface, into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of a plurality of measuring mirror areas, the plurality of measuring mirror areas part of at least one measuring mirror fixedly connected to the one of the supports, and splitting at least a second beam of said plurality of beams, via said beam-splitter block, into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and said second reference beam being reflected in a substantially orthogonal direction with respect to the first reference beam by the first reflector and away from the beam-splitter block, and converting beams which are reflected towards detectors into electric measuring signals, as recited in claim 18.

Thus, even assuming the cited portions of Hill are properly combinable with those of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. Dependent claims 20 and 21 are allowable at least by virtue of their dependency from claim 18, and for the additional features they recite.

Therefore, for at least the above reasons, Applicant respectfully submits that the rejections of claims 5-6, 13-14, 20 and 21 under 35 U.S.C. §103(a) based on Hill and Loopstra should be withdrawn and the claims allowed.

Claims 5-6, 13-14 and 20-21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Van Den Brink in view of Loopstra. Applicant respectfully traverses this rejection because a *prima facie* case of obviousness has not been established.

Dependent claims 5-6, 13-14 and 20-21 are allowable at least by virtue of their dependency from claims 3, 11 and 18, respectively, and for the additional features they recite. As noted above, the cited portions of Van Den Brink fail to disclose, teach or suggest claims 3, 11 and 18. Moreover, the cited portions of Loopstra fail to cure the deficiencies of Van Den Brink.

Even assuming the cited portions of Van Den Brink are properly combinable with that of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. As discussed above, the cited portions of Loopstra teach an interferometer system 101 including a polarization-sensitive splitting prism 201, having an interface 202 for splitting radiation beams b_{25}, b_{20} from sources 229, 225, respectively, a reference reflector 205 and a Z reflector 164 for measuring displacement of a measuring mirror R_1, having Z measuring mirror R_3. Beam b_{25} is split by the interface 202 into a reference component that is reflected off of the reference reflector 205 and a measuring component that is incident on the Z measuring mirror R_3 and reflected off of Z reflector 164. Beam b_{20} is split by the interface 202 into a reference component that is reflected off of the reference reflector 205 and a measuring component that is incident on the measuring mirror R_1. *See*, column 20, lines 12-50 and Figure 11 of Loopstra. The reference components of beam b_{25} and of beam b_{20} exit the prism 201 in the **same direction**. This is in striking contrast to claim 3 in which the second reference beam associated with the at least one second beam exits the first reflector in a ***direction substantially orthogonal*** to the direction of the first reference beam associated with the at least one first beam that exits the beam-splitter block and away from the beam-splitter block.

Thus, any proper combination of the cited portions of Van Den Brink and Loopstra, cannot result in any way, in the invention of claim 3. Dependent claims 5 and 6 are allowable at least by virtue of their dependency from claim 3, and for the additional features they recite.

As noted above, the cited portions of Van Den Brink fail to disclose, teach or suggest claim 11. Similarly, as discussed above, the cited portions of Loopstra fail to remedy the defects of Van Den Brink. Specifically, the cited portions of Loopstra fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, an interferometer system configured to measure displacement of one of the supports, wherein said interferometer system comprises, at least one measuring mirror fixedly connected to the one of the supports, said at least one measuring mirror comprising a plurality of measuring mirror areas; at least one reference mirror comprising one or more reference mirror areas that are configured to prevent beams from passing through said reference mirror; a beam generator configured to generate a plurality of beams, said beam generator comprising a beam-splitter block having a beam-splitting surface; and a plurality of radiation-sensitive detectors configured to convert radiation beams reflected towards said detectors into electric measuring signals, wherein said

beam-splitter block is configured to split at least one first beam of said plurality of radiation beams into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of said plurality of measuring mirror areas, wherein said beam-splitter block is configured to split at least one second beam of said plurality of radiation beams into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and wherein, in use, the second reference beam associated with the at least one second beam exits the first reflector in direction substantially orthogonal to the direction the first reference beam associated with the at least one first beam exits the beam-splitter block and away from the beam-splitter block, as recited in claim 11.

Thus, even assuming the cited portions of Van Den Brink are properly combinable with those of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. Dependent claims 13 and 14 are allowable at least by virtue of their dependency from claim 11, and for the additional features they recite.

As noted above, the cited portions of Van Den Brink fail to disclose, teach or suggest claim 18. Similarly, as discussed above, the cited portions of Loopstra fail to remedy the defects of Van Den Brink. Specifically, the cited portions of Loopstra fail to disclose, teach or suggest a device manufacturing method comprising, *inter alia*, determining a position of one of the supports with an interferometer system, the determining including splitting at least a first beam of a plurality of beams, via a beam-splitter block having a beam-splitting surface, into a first measuring beam and a first reference beam, said first reference beam only being reflected by one or more first reference mirrors located in a fixed position with respect to said beam-splitter block, said first measuring beam being reflected by a first measuring mirror area of a plurality of measuring mirror areas, the plurality of measuring mirror areas part of at least one measuring mirror fixedly connected to the one of the supports, and splitting at least a second beam of said plurality of beams, via said beam-splitter block, into a second measuring beam and a second reference beam, said second measuring beam being reflected by a second

measuring mirror area of said plurality of measuring mirror areas, and said second reference beam being reflected by a first reflector that is fixedly positioned with respect to said beam-splitter block and by at least one third mirror area, which is movable with respect to said beam-splitter block, and said second reference beam being reflected in a substantially orthogonal direction with respect to the first reference beam by the first reflector and away from the beam-splitter block, and converting beams which are reflected towards detectors into electric measuring signals, as recited in claim 18.

Thus, even assuming the cited portions of Van Den Brink are properly combinable with those of Loopstra, which Applicant does not concede, the alleged combination would still fail to disclose, teach or suggest all the features of the claim. Dependent claims 20 and 21 are allowable at least by virtue of their dependency from claim 18, and for the additional features they recite.

Therefore, for at least the above reasons, Applicant respectfully submits that the rejections of claims 5-6, 13-14, 20 and 21 under 35 U.S.C. §103(a) based on Van Den Brink and Loopstra should be withdrawn and the claims allowed.

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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Respectfully submitted,

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Enclosure: ABSTRACT